

**FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-8081**  
**USDA FOREST SERVICE, MOSES LAKE AIRTANKER BASE**

**INTRODUCTION**

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST 8081. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to the Port of Moses Lake, Industrial Land Application System. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix B—Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix D—Response to Comments.

<b><u>GENERAL INFORMATION</u></b>	
Applicant	USDA Forest Service
Facility Name and Address	Moses Lake Airtanker Base 8868 Turner Road NE Moses Lake, WA 98837
Type of Facility:	Fire Fighting Airtanker Loading
Facility Discharge Location	Latitude: 47° 11' 36" N Longitude: 119° 18' 12" W.
Treatment Plant Receiving Discharge	Port of Moses Lake, Land Application System
Contact at Facility	Name: Rob Meade Telephone #: (509) 762-6184
Responsible Official	Name: Jim Boynton Title: Forest Supervisor Address: 215 Melody Lane, Wenatchee, WA 98801 Telephone #: (509) 664-9200

## TABLE OF CONTENTS

INTRODUCTION .....	1
BACKGROUND INFORMATION .....	3
DESCRIPTION OF THE FACILITY .....	3
Industrial Processes.....	3
PERMIT STATUS.....	3
SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT.....	4
WASTEWATER CHARACTERIZATION.....	4
PROPOSED PERMIT LIMITATIONS.....	5
TECHNOLOGY-BASED EFFLUENT LIMITATIONS.....	5
EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS.....	5
MONITORING REQUIREMENTS.....	6
OTHER PERMIT CONDITIONS .....	6
REPORTING AND RECORDKEEPING .....	6
OPERATIONS AND MAINTENANCE.....	6
PROHIBITED DISCHARGES.....	6
DILUTION PROHIBITED .....	7
SOLID WASTE PLAN .....	7
SPILL PLAN.....	7
SLUG DISCHARGE CONTROL PLAN .....	7
GENERAL CONDITIONS .....	7
PUBLIC NOTIFICATION OF NONCOMPLIANCE .....	8
RECOMMENDATION FOR PERMIT ISSUANCE .....	8
REFERENCES FOR TEXT AND APPENDICES .....	8
APPENDICES .....	9
APPENDIX A—FIGURES AND TABLES .....	9
APPENDIX B—PUBLIC INVOLVEMENT INFORMATION .....	14
APPENDIX C—GLOSSARY.....	15
APPENDIX D—RESPONSE TO COMMENTS.....	19

## **BACKGROUND INFORMATION**

### *DESCRIPTION OF THE FACILITY*

The facility is an aircraft fire retardant loading operation for assistance to wild land fire fighting activities. The facility is located at the Port of Moses Lake, Grant County International Airport (Figure 1, in Appendix A). Wastewater from the operation is discharged to the Port of Moses Lake, Land Treatment System. Activities occur during the fire fighting season (June to October) and vary depending on the severity of the fire season. This facility is not a Significant Industrial User, nor is it subject to categorical pretreatment standards.

No aircraft are permanently stationed at the base. The number of aircraft serviced by the facility can vary from 1 to 8 air tankers at one time, depending on the demand. There are a total of four aircraft loading stations at the site.

The Port of Moses Lake owns and operates the Grant County International Airport, located just north of the City of Moses Lake. In 1999, the Port completed construction of a wastewater collection and disposal system to serve industries located in the nearby area. The Port's facilities include a collection system (gravity sewer lines, a pump station, and pressurized sewer lines), a storage pond (a single lined and covered storage cell), and the irrigation system (piping, pumping station, fresh water well, irrigation sprinklers and irrigation land).

### **INDUSTRIAL PROCESSES**

The fire retardant consists of liquid ammonium polyphosphate solution. The ammonium polyphosphate is brought to the site in liquid form and stored onsite in an above ground tank farm. When an air tanker is ordered to respond to a fire incident, the ammonium phosphate concentrate is mixed with water and transferred to the aircraft.

Wastewaters consist of both runway and aircraft washing. This wastewater is directed to a trench that runs parallel to the runway. The water then flows into a series of holding tanks for oil/water separation and grit removal. Overflow from the tanks is pumped into the Port of Moses Lake, land treatment system. Wash water may contain ammonia phosphate from small losses occurring during loading, and petroleum and residual ammonia phosphate from aircraft washing. Any oil leaking from the engines is contained, and not allowed (to the extent feasible) to drip on the runway. Planes are normally refueled in the loading station, if the refueling does not impede ongoing operations.

To estimate flows, pump times at the pump station are recorded on a daily basis. Depending on the severity of the fire season, flows are highly variable. The initial SWD permit application listed a maximum daily flow of 10,000 gpd. However, the 2006 renewal application lists a daily maximum flow of 1,800 gpd, based on actual operating conditions at the site since 2001.

### *PERMIT STATUS*

A State Waste Discharge (SWD) Permit application for the operations was received on April 27, 2001 and accepted by the Department on April 29, 2001. A temporary permit authorizing the discharge to the Port of Moses Lake land treatment system became effective on June 29, 2001.

An application for permit renewal was submitted to the Department on February 1, 2006 and accepted by the Department on March 8, 2006.

*SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT*

The facility last received an inspection in July, 2003. During the history of the previous permit, the Permittee has remained in compliance with the discharge flows and characteristics listed in the previous SWD permit application.

*WASTEWATER CHARACTERIZATION*

The concentration of pollutants in the discharge was reported in the permit application. The application contained sampling results from year 2004, and a more detailed analyses from the 2001 operating year (see Table 1, in Appendix A). The 2001 data contained sample results of wastewater containing undiluted fire retardant. This occurred during the first year of operation and was the result of pump tests and spillage during re-plumbing activities.

A summary of the monitoring results are shown below:

Parameter	Concentration (mg/L)
Alkalinity	827
Calcium	37.1
Chloride	126
Magnesium	21.1
Potassium	20.4
Sodium	69.6
Sulfate	126.2
Oil and Grease	24.5
TDS	2,964
TPH	14.2
Total P	1,142
TKN	800
Nitrate/Nitrite	0.51
Ammonia	898

Wastewater concentrations of ammonia and phosphate are high, corresponding to the main ingredients of the fire retardant (ammonium polyphosphate solution). There are also detectable amounts of oil and grease and total petroleum hydrocarbons in the discharge.

Effluent flow from years 2001 to 2004 are summarized below:

Year	Total Flow (gallons)	Highest Monthly Average (gpd)
2001	181,104	1,479
2002	141,120	1,764

Year	Total Flow (gallons)	Highest Monthly Average (gpd)
2003	87,024	-
2004	150,528	-

Table 2 (in Appendix A) compares the constituent and hydraulic loadings from the airtanker base to the Port of Moses Lake's land treatment system. The airtanker base contributes from 27 to 78 percent of the Port's total phosphorus and nitrogen, and about 1% of the flow. The application rates of nitrogen and phosphorus at the Port's land treatment system are relatively low at about 20 lbs/acre/year (supplemental fertilizers are needed to meet crop requirements).

### PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not interfere with the operation of the POTW.

The minimum requirements to demonstrate compliance with the AKART standard and specific design criteria for this facility are grit removal/oil water separation provided by the existing 3 chamber tank system.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

#### *TECHNOLOGY-BASED EFFLUENT LIMITATIONS*

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). To satisfy the requirement for AKART, the permit requires a number of best management practices (the preparation of Spill Plan, Slug Control Plan, Operation and Maintenance Manual, and Solid Waste Management Plan).

#### *EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS*

In order to protect the Port of Moses Lake, Land Treatment system from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, limitations for certain parameters are necessary. These limitations are based on local limits established by the Port of Moses Lake and codified in their Industrial Process Water Treatment Facility Use Resolution.

Effluent concentrations for a number of parameters exceed local limits set by the Port of Moses Lake (Table 3, in Appendix A). However, because effluent flow is small, the Department believes that the pollutant concentrations in the discharge (with technology-based controls in place) will not cause problems at the receiving POTW such as interference, pass-through or hazardous exposure to POTW workers nor will it result in unacceptable pollutant levels in the POTW's sludge.

The Port of Moses Lake's Use Resolution contains provisions for allowing mass based limits in lieu of concentration limits; and for reducing the number of parameters that are monitored. However, the Port's current subscription agreement with the Permittee does not include such

provisions. The proposed permit will contain a requirement that the subscription agreement is updated between the Permittee and the Port.

At this time, the proposed permit will only contain the Port's local limits for pH and TSS. The Permittee's treatment system should be able to reliably meet these limitations, based on best professional judgment. If the updated subscription agreement contains additional effluent limitations, these will be added to the permit via modification.

## **MONITORING REQUIREMENTS**

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110).

The monitoring schedule is detailed in the proposed permit under Condition S2 and S3. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

Monitoring for calcium, magnesium, sodium, potassium, nitrate, ammonia, total kjeldahl nitrogen, total phosphorus, sulfate, chloride, alkalinity, manganese, fluoride, total dissolved solids (TDS), settleable solids, total petroleum hydrocarbons, BOD, COD, lead, and cyanide is being required to further characterize the effluent. These pollutants have the potential to impact the Port of Moses Lake's land treatment system.

The proposed permit also requires monitoring (once per year) of the other parameters listed in the Port of Moses Lake's local limits. If the updated subscription agreement (see discussion above) reduces the number of parameters required to be monitored, the permit will be modified to reflect the new monitoring schedule.

## **OTHER PERMIT CONDITIONS**

### ***REPORTING AND RECORDKEEPING***

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110 and 40 CFR 403.12 (e),(g), and (h)).

### ***OPERATIONS AND MAINTENANCE***

The proposed permit contains condition S.5. as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment. The proposed permit requires submission of an updated O&M manual for the entire wastewater system.

### ***PROHIBITED DISCHARGES***

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

### *DILUTION PROHIBITED*

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

### *SOLID WASTE PLAN*

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

This proposed permit requires, under authority of RCW 90.48.080, that the Permittee develop and submit to the Department a solid waste plan to prevent solid waste from causing pollution of waters of the state. The plan must also be submitted to the local solid waste permitting agency for approval.

### *SPILL PLAN*

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The proposed permit requires the Permittee to develop and implement a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs.

### *SLUG DISCHARGE CONTROL PLAN*

The Department has determined that the Permittee has the potential for a batch discharge or a spill that could adversely effect the POTW therefore a slug discharge control plan is required (40 CFR 403.8 (f)).

### *GENERAL CONDITIONS*

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G11 requires the payment of permit fees. Condition G12 describes the penalties for violating permit conditions.

## **PUBLIC NOTIFICATION OF NONCOMPLIANCE**

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

## **RECOMMENDATION FOR PERMIT ISSUANCE**

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued for 5 years.

## **REFERENCES FOR TEXT AND APPENDICES**

Washington State Department of Ecology.

Laws and Regulations( <http://www.ecy.wa.gov/laws-rules/index.html> )

Permit and Wastewater Related Information

(<http://www.ecy.wa.gov/programs/wq/wastewater/index.html>)

## **APPENDICES**

### *APPENDIX A—FIGURES AND TABLES*

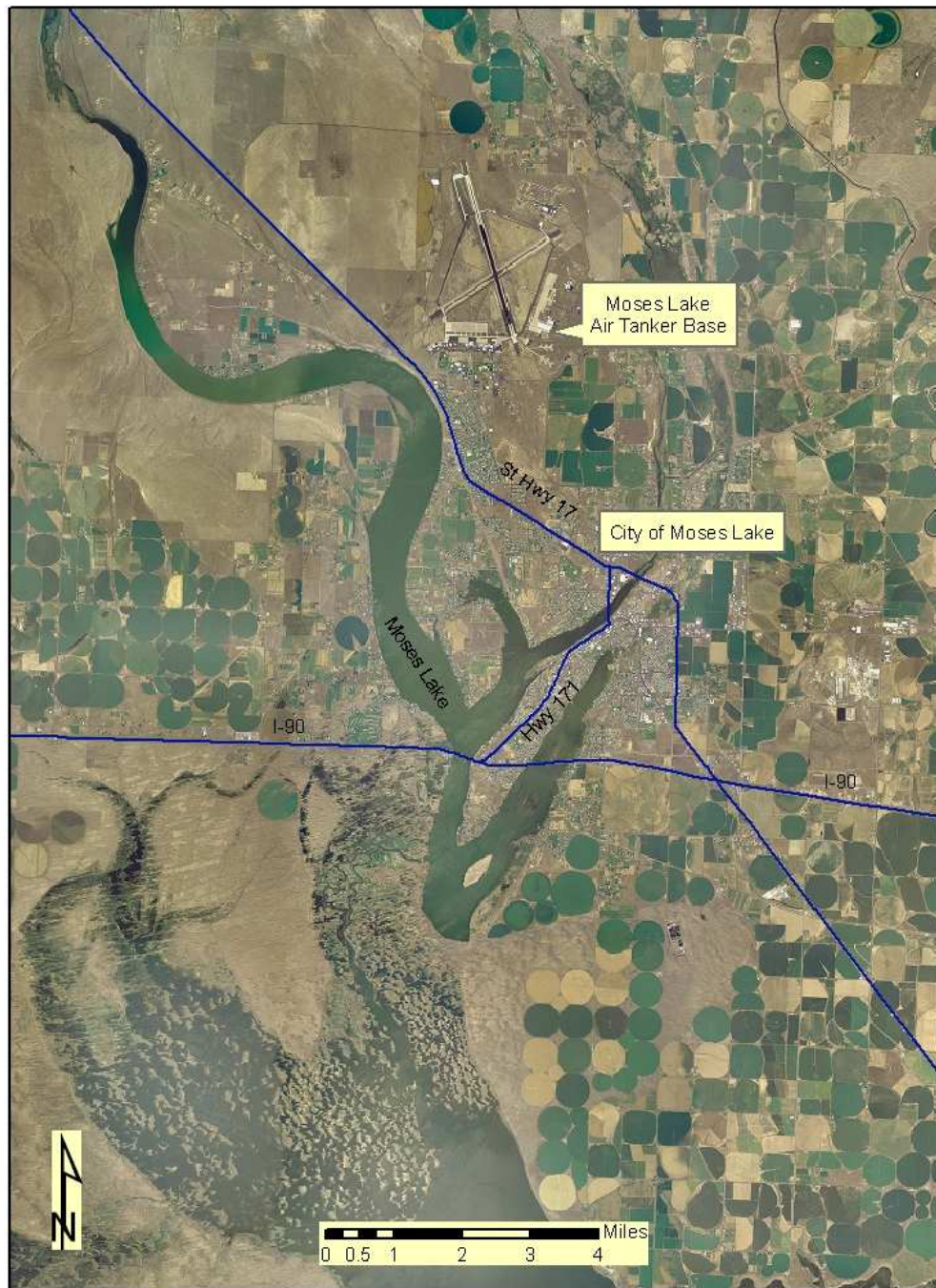


Figure1. Moses Lake Air Tanker Base

**Table 1 - Effluent Sampling Results, Moses Lake Airtanker Base**

Parameter (mg/L unless noted)	2001 Sampling				2004 Sampling result	2001/2004 Avg
	# samples	Max	Min	Avg		
Alkalinity	-	-	-	-	827	-
Aluminum	3	47.1	3.13	20.71	-	-
Arsenic	12	0.0391	0.0043	0.0125	-	-
Boron	-	-	-	-	0.58	-
Cadmium	3	0.032	0.015	0.0255	-	-
Calcium	3	61.4	15.7	37	37.3	37.1
Chromium	3	2.2	0.0944	0.9578	-	-
Chloride	-	-	-	-	126	-
Copper	3	0.0279	0.002	0.0116	-	-
Total Cyande	3	49.1	3.2	20.7	-	-
Amenable Cyande	9	1.4	1.4	1.4	-	-
Flouride	-	-	-	-	4.1	-
Lead	1	4.4	ND	1.09	-	-
Magnesium	-	-	-	-	24.1	-
Manganese	-	-	-	-	0.829	-
Mercury	8	ND	ND	ND	-	-
Molybdenum	3	0.117	0.0151	0.057	-	-
Nickel	3	0.0074	0.0012	0.0029	-	-
Potassium	3	34.1	9.29	21.9	16	20.4
Selenium	3	0.0222	0.0074	0.0099	-	-
Silver	3	ND	ND	ND	-	-
Sodium	-	-	-	-	69.6	-
Sodium Absorption Ratio	-	-	-	-	2.18	-
Strontium	-	-	-	-	0.167	-
Zinc	3	0.381	0.236	0.3143	-	-
Sulfate	3	222	63.1	160	24.6	126.2
BOD	3	185	17.8	67.6	-	-
COD	3	146	52.9	114	-	-
TSS	3	49.2	36	41.6	231	89.0
TDS	-	-	-	-	2964	-
Oil and Grease (HEM)	12	82.4	3	24.48	-	-
TPH	2	25.6	8	14.2	-	-
pH (s.u.)	12	7.6	6.9	7.3	-	-
TKN	12	4990	43	831	422	800
Total Phosphorus	12	5280	2.9	1177	722	1142
TTO Total	2	0.03702	0.00855	0.02278	-	-
TTO Volatilves	2	0.00855	0.00855	0.00855	-	-
Carbon Tetrachloride	2	ND	ND	ND	-	-
TTO Semivolatiles	2	0.037	0.037	0.037	-	-
Phenol	2	0.035	0.035	0.0175	-	-
TTO OC Pesticides	2	0.0000168	0.0000168	0.0000168	-	-
Nitrite/Nitrate	12	2.3	0.028	0.358	2.3	0.51
Ammonia	12	5280	0.045	971	25	898

**Table 2 - Hydraulic and Nutrient Loadings, Moses Lake Airtanker Base**

Parameter	2001 Airtanker Base Loadings			2001 Port Sprayfield Loadings	
	Concentration (mg/L)	Loading (lbs)	Loading (lbs/acre)	lbs/acre	% Loading
Chloride	-	-	-	25	-
Magnesium	-	-	-	26	-
Potassium	21.9	33.1	0.31	16	2%
Sodium	-	-	-	42	-
Sulfate	160	242	2.2	12	19%
TDS	-	-	-	453	-
Total Phosphorus	1,177	1,777	16.5	21	78%
TKN	831	1,254	11.6	-	-
Nitrite/Nitrate	0.358	0.54	0.01	-	-
Ammonia	971	1,466	13.6	-	-
Total N	971	1,466	13.6	21	65%

Total Gallons  
from Airtanker Base

181,000

Total Gallons to Port's  
Storage Lagoon

16,502,000

% Gallons from Airtanker Base

1.1%

Parameter	2004 Airtanker Base Loadings			2004 Port Sprayfield Loadings	
	Concentration (mg/L)	Loading (lbs)	Loading (lbs/acre)	lbs/acre	% Loading
Chloride	126	158.2	1.46	42	3%
Magnesium	24.1	30.3	0.28	53	1%
Potassium	16	20.1	0.19	44	0.4%
Sodium	69.6	87.4	0.81	169	0.5%
Sulfate	24.6	30.9	0.29	78	0.4%
TDS	2,964	3,721	34.45	1,235	3%
Total Phosphorus	722	906	8.39	17	49%
TKN	422	530	4.91	-	-
Nitrite/Nitrate	2.3	2.9	0.03	-	-
Ammonia	25	31.4	0.29	-	-
Total N	424	532.7	4.93	18	27%

Total Gallons  
from Airtanker Base

150,528

Total Gallons to Port's  
Storage Lagoon

20,800,000

% Gallons from Airtanker Base

0.7%

**Table 3 - Effluent Comparison with Port of Moses Lake Local Limits, Moses Lake Airtanker Base**

Parameter	Six Month Average	Maximum Daily	2001/2004 Sampling Results	
			Average	Maximum
BOD	20	40	<b>67.6</b>	<b>185</b>
Total Nitrogen	40	80	-	-
Total Kjeldahl Nitrogen	4.0	9.0	<b>800</b>	<b>4,990</b>
Fats, Oil, and Grease	20	40	<b>24.5</b>	<b>82.4</b>
Total Dissolved Solids	1,000	2,000	-	<b>2,964</b>
Conductivity, µmhos/cm	1,600	3,200	-	-
pH, s.u.	5.5 to 8.0	5.0 to 9.0	7.3	7.6
Sodium Adsorption Ratio	6	9	-	<b>69.6</b>
Aluminum	5	20	<b>21</b>	<b>47</b>
Arsenic	0.1	2	0.013	0.039
Beryllium	0.1	0.5	-	-
Boron	1.0	2.0	-	0.58
Cadmium	0.01	0.05	<b>0.026</b>	0.032
Chromium	0.1	1	<b>0.96</b>	<b>2.2</b>
Cobalt	0.05	5	-	-
Copper	1.0	5.0	0.01	0.03
Fluoride	4	15	-	4.1
Iron	5	20	-	-
Lead	5	10	1.1	4.4
Lithium	2.5	2.5	-	-
Manganese	0.2	10	-	0.8
Molybdenum	0.01	0.05	<b>0.06</b>	<b>0.12</b>
Nickel	0.2	2	0.003	0.01
Selenium	0.02	0.02	0.010	<b>0.022</b>
Vanadium	0.1	1.0	-	-
Zinc	2.0	10	0.31	0.38

All units in mg/L unless noted. Sodium Adsorption Ratio is a unitless parameter

**Bold numbers indicate exceedence of local limit**

*APPENDIX B—PUBLIC INVOLVEMENT INFORMATION*

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

The Department will publish a Public Notice of Draft (PNOD) on May 25, 2006 in the Columbia Basin Herald to inform the public that an application has been submitted, and that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator  
Department of Ecology  
Eastern Regional Office  
4601 North Monroe Street  
Spokane, WA 99205-1295

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (509) 329-3400, or by writing to the address listed above.

### *APPENDIX C—GLOSSARY*

**Ammonia**—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

**Average Monthly Discharge Limitation**—The average of the measured values obtained over a calendar month's time.

**Best Management Practices (BMPs)**--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

**BOD<sub>5</sub>**--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD<sub>5</sub> is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

**Bypass**—The intentional diversion of waste streams from any portion of the collection or treatment facility.

**Categorical Pretreatment Standards**—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

**Compliance Inspection - Without Sampling**--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

**Compliance Inspection - With Sampling**--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

**Composite Sample**—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

**Construction Activity**—Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

**Continuous Monitoring**—Uninterrupted, unless otherwise noted in the permit.

**Engineering Report**—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

**Grab Sample**—A single sample or measurement taken at a specific time or over a short period of time as is feasible.

**Industrial User**—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

**Industrial Wastewater**—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

**Interference**—A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal and;

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

**Local Limits**—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

**Maximum Daily Discharge Limitation**—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

**Method Detection Level (MDL)**--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

**Pass-through**—A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

**pH**—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

**Potential Significant Industrial User**--A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

- a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;
- b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

**Quantification Level (QL)**-- A calculated value five times the MDL (method detection level).

**Significant Industrial User (SIU)**--

- 1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;
- 2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority\* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority\* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

\*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

**Slug Discharge**—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

**State Waters**—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

**Stormwater**—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

**Technology-based Effluent Limit**—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

**Total Coliform Bacteria**—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

**Total Dissolved Solids**—That portion of total solids in water or wastewater that passes through a specific filter.

**Total Suspended Solids (TSS)**--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

**Water Quality-based Effluent Limit**—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

*APPENDIX D—RESPONSE TO COMMENTS*

The Department did not receive any comments on the proposed permit.